

THAT WHICH IS CLAIMED:

1. A grinding element adapted to be arranged on an outer surface of a frame for a grinder stone used to defiber wood, the grinding element comprising:
 - 5 a plurality of grinding segments, each comprised of a grinding ceramic material;
 - a fastening frame having a first surface configured to operably engage the frame of the grinder stone and an opposed second surface configured to receive the grinding segments, the grinding segments cooperating to substantially cover the second surface;
- 10 a bonding agent disposed between the grinding elements and the second surface so as to secure the grinding elements to the second surface; and
- a fastening device configured to operably engage the fastening frame and to secure the fastening frame to the frame of the grinder stone such that the grinding segments form at least a portion of a grinding surface of the
- 15 grinder stone.

2. A grinding element according to claim 1, wherein the first surface of the fastening frame is substantially planar.

- 20 3. A grinding element according to claim 1, wherein the fastening frame is comprised of a plastic material.

4. A grinding element according to claim 3, further comprising a fastening sleeve operably engaged with the fastening frame and defining a fastening hole, the
- 25 fastening sleeve being configured to receive the fastening device through the fastening hole such that the fastening frame is secured to the frame of the grinder stone via the fastening sleeve.

- 30 5. A grinding element according to claim 1, wherein the bonding agent is comprised of at least one of a plastic material and a fiber-reinforced material.

6. A grinding element according to claim 1, wherein each grinding segment includes a side surface and the bonding agent extends at least partially between opposing sides of adjacently-disposed grinding segments on the fastening frame.

5 7. A grinding element according to claim 1, wherein the first surface of the fastening frame includes at least one of a protrusion and a recess, the outer surface of the grinder stone frame being configured to be complementary with respect to the first surface and to have the fastening frame secured thereto such that forces produced during a grinding process are transmitted from the respective grinding element to the grinder
10 stone frame.

8. A grinder stone adapted to defiber wood, comprising:
a grinder stone frame defining an outer surface and adapted to be rotatable about a shaft; and
15 a plurality of grinding elements operably engaged with the outer surface of the grinder stone frame such that the grinding elements cooperate to form a substantially cylindrical grinding surface of the grinder stone, each grinding element comprising:
a plurality of grinding segments, each comprised of a grinding ceramic material;
a fastening frame having a first surface configured to operably engage the frame of the grinder stone and an opposed second surface configured to receive the grinding segments, the grinding segments cooperating to substantially cover the second surface;
25 a bonding agent disposed between the grinding elements and the second surface so as to secure the grinding elements to the second surface;
and
a fastening device configured to operably engage the fastening frame and to secure the fastening frame to the grinder stone frame such
30 that the grinding segments form at least a portion of the grinding surface of the grinder stone.

9. A grinder stone according to claim 8, wherein the first surface of the fastening frame is substantially planar.

10. A grinder stone according to claim 8, wherein the fastening frame is comprised of a plastic material.

11. A grinder stone according to claim 10, further comprising a fastening sleeve operably engaged with the fastening frame and defining a fastening hole, the fastening sleeve being configured to receive the fastening device through the fastening hole such that the fastening frame is secured to the grinder stone frame via the fastening sleeve.

12. A grinder stone according to claim 8, wherein the bonding agent is comprised of at least one of a plastic material and a fiber-reinforced material.

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13. A grinder stone according to claim 8, wherein each grinding segment includes a side surface and the bonding agent extends at least partially between opposing sides of adjacently-disposed grinding segments on the fastening frame.

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14. A grinder stone according to claim 8, wherein the first surface of the fastening frame includes at least one of a protrusion and a recess, the outer surface of the grinder stone frame being configured to be complementary with respect to the first surface and to have the fastening frame secured thereto such that forces produced during a grinding process are transmitted from the respective grinding element to the grinder stone frame.

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